R E M A R K S

Claim 6 has been formally amended to provide proper antecedent language and thus to overcome the rejection under 35 U.S.C. 112. Although this is believed to have been implicit in the original language, the claim now also explicitly defines the control program as being a **computer** control program and the signal as being an **electronic** signal, as proposed by the Examiner. This amendment having been necessitated by the Examiner's formal rejection and proposal, entry of this formal amendment is respectfully solicited since it places the application either in condition for allowance or in better condition for appeal.

Allowable claim 8 has been amended to incorporate therein the subject matter of claim 6 whereon it depends. This indepedent claim is believed to be in condition for allowance.

Rejection of claim 6 under 35 U.S.C. 102(b) as being anticipated by the cited Wallers patent or under 35 U.S.C. 103(a) as being unpatentable over the Wallers patent in view of Sakurai et al, the secondary reference, is respectfully traversed.

As the following comments will show, the Wallers patent is not believed to be pertinent to the claimed mill saw. Wallers describes a hydraulic conveyor motor 15, hydraulic fluid being delivered to motor 15 under control of rotating control valve 21 whose control disc 39 is fixedly connected to crank shaft 9 by crank 25 (see Fig. 2). Thus, control disc 39 is rotated in phase with crank shaft 9. The control disc has a control recess 48 (Fig. 4) communicating with return conduit 22 (Fig. 1) so that hydraulic fluid pump 18 is connected to the return conduit while recess 48 is in communication with return conduit 22 and does not deliver hydraulic fluid to motor 15. Thus, conveyance by motor 15 is interrupted during that period. Because of curvature 47 of control recess 48, the opening and closing of return conduit 22 proceeds smoothly, rather than abruptly, so that motor 15 is accelerated and braked smoothly. At any rate, the control of the motor depends on, and is determined by, the position of rotation of crank shaft 9 because control disc 39 is fixedly connected to the crank shaft by stub shaft 26 and crank 25.

As this description of the Wallers control clearly shows, the control recited in claim 6 is neither anticipated by, nor obvious from, the patent. What the Examiner has designated as "signal transmitter (16)" is, in fact, the inlet conduit from the pump to the motor. Feature (f) of claim 6 is entirely

missing from the reference. In other words, Wallers has no signal transmitter transmitting a signal (whether electronic or mechanical) indicating a preset position of rotation of the crank drive to a controlling system connected to motor 15. As Fig. 1 of Wallers shows, control valve 21 connects pump 18 to motor 15 during the major portion of the rotation of the valve, i.e. except when recess 48 communicates with return conduit 22, during which time the speed of the motor is constant. During the short period that recess 48 communicates with return conduit 22, the motor is slowly braked and then slowly accelerated again. Thus, feature (d) of claim 6 is also absent from Wallers because motor 15 is operated at a constant speed, except for the short transition periods when it is braked and accelerated, it is not intermittently driven in dependence on the cutting speed. Thus, the structure and operation of applicants' device differ fundamentally from Wallers.

Claim 6 has been formally amended to make the electronic operation of the control explicit, thus clearly distinguishing over the mechanical control of Wallers. However, the Sakurai et al patent has been cited by the Examiner in an effort to show it to be obvious "to send an electronic signal to a computer controller, and to use that information to control how the work is fed (33) to the tool."

Sakurai et al's tachometer generator 41 controls the revolving speed of a **bandsaw** blade. The operating conditions of a bandsaw blade cannot be compared with the operating conditions of saw frames comprising parallel saw blades since the stock to be cut is at rest during cutting and only the bandsaw blade is driven. The bandsaw blade is driven at a constant cutting speed while applicants' stock is driven by a motor intermittently operating the feed conveyor. Thus, it is not seen how Sakurai et al's teaching can make applicants' control obvious. Sakurai et al measure the revolving speed of the bandsaw blade and not a preset position of the revolving bandsaw blade. The latter measurement would make no sense in the Sakurai et al apparatus since the cutting conditions are the same in all positions of the revolving bandsaw blade. Thus, while tachometer generator 41 may transmit a signal indicating the speed of the revolving bandsaw blade, it suggests nothing about a signal transmitter transmitting a signal indicating a preset position of rotation of applicants' crank drive. Therefore, nothing in Sakurai et al makes it obvious to modify Wallers' mechanical control system by the control specifically recited in claim 6. Tachometer generator 41 does not suggest the signal transmitter set forth under (f) and, as pointed out hereinabove, nothing in either cited patent suggests feature (d). The combination of the two patents is not obvious from anything found in either one, and if it were,

it would not lead to the claimed invention.

A sincere effort having been made to overcome all grounds of rejection, favorable reconsideration and allowance of claim 6 are respectfully solicited. Upon allowance of generic claim 6, allowance of non-elected claims 7, 9 and 10 dependent thereon, is believed to be in order. Claim 8 is believed to be in condition for allowance.

Respectfully submitted,

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Enclosure: Marked-up copy of changes
Request for Extension of time with check for $ 55.00

I hereby certify that this correspondence is being sent to the US PTO by express mail on February 27, 2003.

Maria Guastella

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Amend claim 6 to read as follows:--

6 (amended). A mill saw comprising

(a) a saw frame comprising parallel saw blades cutting only in a stroke direction,

(b) a slider-crank drive imparting cutting strokes to the saw frame at a given frequency,

(c) a feed conveyor for feeding stock to be cut by the saw blades in a feed direction,

(1) the saw blades being cantilevered in the feed direction, and

(2) the saw frame moving at a cutting speed relative to the stock during the cutting strokes,

(d) at least one motor separated from the slider-crank drive for intermittently driving the feed conveyor conveying step-by-conveying step during the cutting strokes of the saw frame in dependence on the cutting speed,

(e) a controlling system connected to the at least one motor, the controlling system comprising

(1) a stored computer control program for the conveying steps adapted to the frequency of the cutting strokes, and

(f) a signal transmitter connected to the controlling system,

the signal transmitter transmitting [a] an electronic signal indicating a preset position of rotation of the slider-crank drive to the controlling system.

Amend claim 8 to read as follows:--

8 (amended). [The mill saw of claim 6, wherein] A mill saw comprising

(a) a saw frame comprising parallel saw blades cutting only in a stroke direction,

(b) a slider-crank drive imparting cutting strokes to the saw frame at a given frequency,

(c) a feed conveyor for feeding stock to be cut by the saw blades in a feed direction,

(1) the saw blades being cantilevered in the feed direction, and

(2) the saw frame moving at a cutting speed relative to the stock during the cutting strokes,

(d) at least one motor separated from the slider-crank drive for intermittently driving the feed conveyor conveying step-by-conveying step during the cutting strokes of the saw frame in dependence on the cutting speed,

(e) a controlling system connected to the at least one motor, the controlling system comprising

(1) a stored computer control program for the conveying steps adapted to the frequency of the cutting

strokes, the stored control program [comprises] comprising a first memory for a control program dependent on the speed of the slider-crank drive and a second memory independent thereof for feeding the stock to be cut in dependence on a saw blade disengagement determined by the cantilever of the saw blades, and

(f) a signal transmitter connected to the controlling system, the signal transmitter transmitting an electronic signal indicating a preset position of rotation of the slider-crank drive to the controlling system.